

Release notes for ENDF/B Development g-092_U_235
evaluation

ENDF
B-VII.dev

December 2, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=9228, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=9228, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      261 TO      274
```

2. Although the ENDF manual says MT=458 (fission energy release) is allowed only for the neutron sublibrary, this is too restrictive as all fission events lead to energy release.
MAT=9228, MF= 1, MT=458 (0): En. Rel. OK

```
ERROR(S) FOUND IN MAT=9228, MF= 1, MT=458
MT= 458 FOR NSUB=      0 INVALID                      RECORD NUMBER      294
```

3. Although the ENDF manual says MT=18/MF=4 is allowed only for the neutron sublibrary, this is too restrictive as all fission events lead to emitted neutrons
MAT=9228, MF= 4, MT= 18 (0): Ang. dist. OK

```
ERROR(S) FOUND IN MAT=9228, MF= 4, MT= 18
FILE  4 ALLOWED ONLY IN A NEUTRON DATA SUBLIBRARYRECORD NUMBER      564
```

4. A previous error halted parsing of the current section
MAT=9228, MF= 4, MT= 18 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=9228, MF= 4, MT= 18
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      564 TO      566
```

5. Although the ENDF manual says MT=18/MF=5 (PFNS) and MT=455 (nubar) are allowed only for the neutron sublibrary, this is too restrictive as all fission events lead to emitted neutrons.
MAT=9228, MF= 5, MT= 18 (0): PFNS, nubar OK

```
ERROR(S) FOUND IN MAT=9228, MF= 5, MT= 18
FILE  5 NOT ALLOWED FOR NSUB =      0                      RECORD NUMBER      568
```

6. A previous error halted parsing of the current section
MAT=9228, MF= 5, MT= 18 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=9228, MF= 5, MT= 18
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      568 TO      575
```

7. Although the ENDF manual says MT=18/MF=5 (PFNS) and MT=455 (nubar) are allowed only for the neutron sublibrary, this is too restrictive as all fission events lead to emitted neutrons.
MAT=9228, MF= 5, MT=455 (0): PFNS, nubar OK

```
ERROR(S) FOUND IN MAT=9228, MF= 5, MT=455
FILE  5 NOT ALLOWED FOR NSUB =      0                      RECORD NUMBER      576
```

8. A previous error halted parsing of the current section
MAT=9228, MF= 5, MT=455 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=9228, MF= 5, MT=455
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      576 TO      1165
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=9228, MF= 1, MT=451 (0): Variable range

```

ERROR(S) FOUND IN MAT=9228, MF= 1, MT=451
MOD =      1 OUT OF RANGE      0 -      0      RECORD NUMBER      261

```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 1, MT=455 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 1, MT=455
SECTION  1/455 NOT IN DIRECTORY      RECORD NUMBER      281

```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 1, MT=456 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 1, MT=456
SECTION  1/456 NOT IN DIRECTORY      RECORD NUMBER      289

```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 1, MT=458 (1): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 1, MT=458
SECTION  1/458 NOT IN DIRECTORY      RECORD NUMBER      294

```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 3, MT= 3 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 3, MT= 3
SECTION  3/ 3 NOT IN DIRECTORY      RECORD NUMBER      301

```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 3, MT= 5 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 3, MT= 5
SECTION  3/ 5 NOT IN DIRECTORY      RECORD NUMBER      427

```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 3, MT= 16 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 3, MT= 16
SECTION  3/ 16 NOT IN DIRECTORY      RECORD NUMBER      481

```

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9228, MF= 3, MT= 18 (0): Directory (b)

```

ERROR(S) FOUND IN MAT=9228, MF= 3, MT= 18
SECTION  3/ 18 NOT IN DIRECTORY      RECORD NUMBER      512

```

- Missing a section in directory so your directory is messed up. This error will break everything else

MAT=9228, MF= 6, MT= 5 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9228, MF= 6, MT= 5
SECTION 6/ 5 NOT IN DIRECTORY          RECORD NUMBER    1167
```

- Missing a section in directory so your directory is messed up. This error will break everything else

MAT=9228, MF= 6, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9228, MF= 6, MT= 16
SECTION 6/ 16 NOT IN DIRECTORY          RECORD NUMBER    6924
```

- **fizcon** Errors:

- Missing files (probably spectra for outgoing particles)

MAT -1 MF 6 (1): Missing files (a)

```
ERROR(S) - MISSING SECTIONS IN MAT  -1 MF  6
PRESENCE OF FILE 3, MT=  18 REQUIRES AN EQUIVALENT SECTION IN FILE 6
```

- **fudge-4.0** Errors:

- Calculated and tabulated Q values disagree.

reaction label 0: n[multiplicity:'2'] + U233 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -12214349.73745728 eV vs -1.21471e7 eV!

- Calculated and tabulated thresholds don't agree

reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3.25e6 eV!

- Energy range of data set does not match cross section range

reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n__a / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

- Energy range of data set does not match cross section range

reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n__b / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

- Energy range of data set does not match cross section range

reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n__c / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

6. Energy range of data set does not match cross section range
reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n_d / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

7. Energy range of data set does not match cross section range
reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n_e / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

8. Energy range of data set does not match cross section range
reaction label 1: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] [total fission] / Product: n_f / Distribution: / uncorrelated - energy - general-Evaporation: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1e-05 -> 20000000.0) vs (3250000.0 -> 20000000.0)

9. Calculated and tabulated Q values disagree.
reaction label 2: sumOfRemainingOutputChannels (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -4697826.82208252 eV vs -5.26e6 eV!